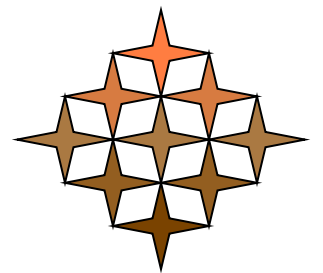
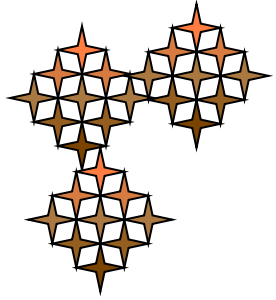


Grid Computing Support

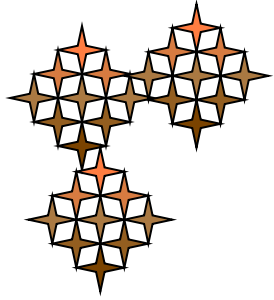
Eileen Berman





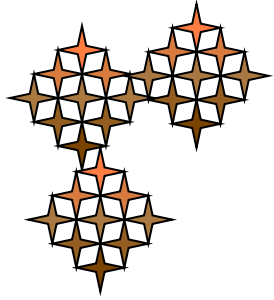
Why am I here?

- To talk about resources available to help you use the grid.
- Learn what you do
- Start a dialogue



Success helping D0

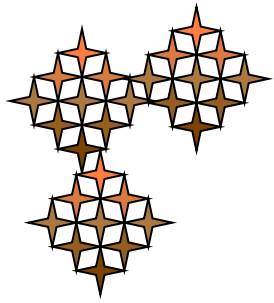
- Sustained, more effective, ongoing Monte Carlo Grid jobs
 - Collaborative effort between D0, Fermilab Grid Support and OSG
 - Success
- Could this model help with Analysis Grid jobs?



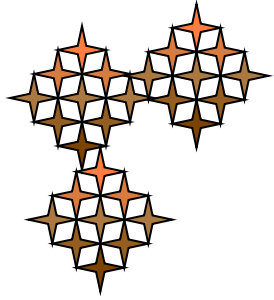
GRID Facilities Mission Statement

To establish and maintain Fermilab as a high performance, robust, highly available, expertly supported and documented Premier Grid Facility which supports the scientific program based on Computing Division and Laboratory priorities.

(continued)

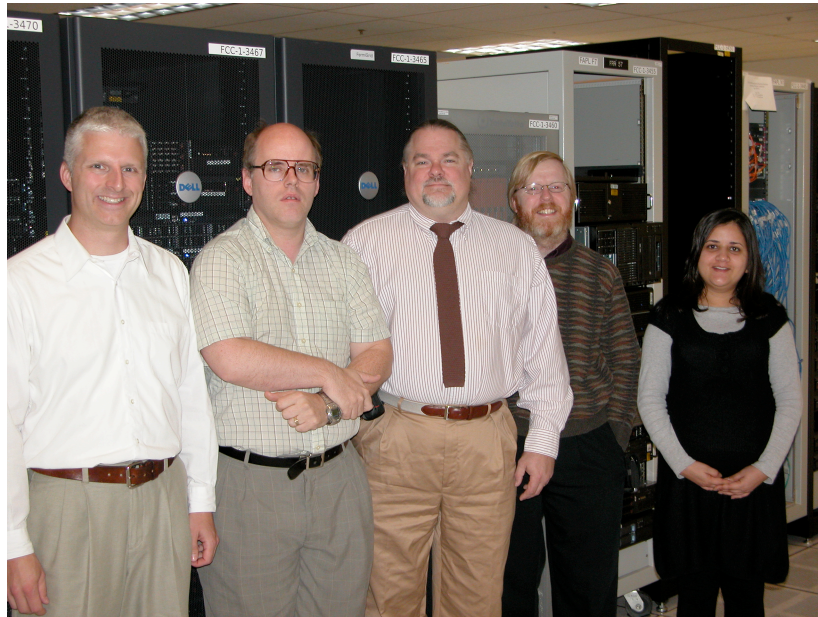
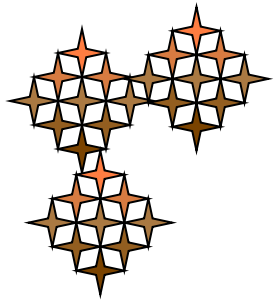


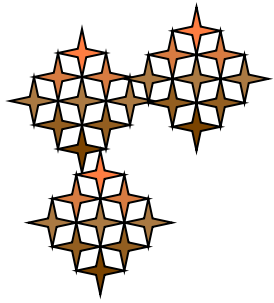
The department provides production infrastructure and software, together with leading edge and innovative computing solutions, to meet the needs of the Fermilab Grid community and takes a strong leadership role in the development and operation of the global computing infrastructure of the Open Science Grid.



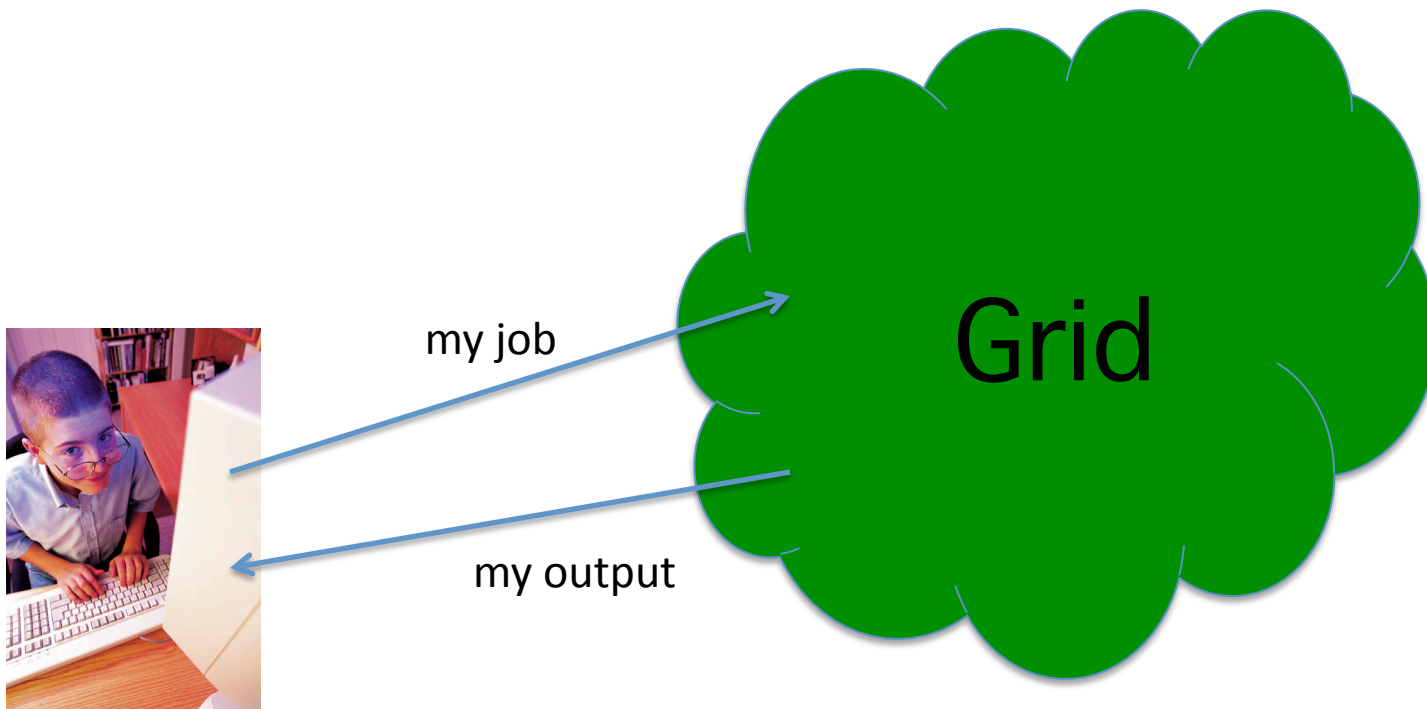
Briefly This Means

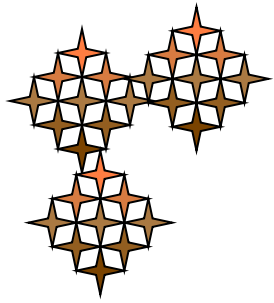
- Fermilab Campus Grid (FermiGrid) Operations, Support, Help, Development, & Integration
- Gateway to Open Science Grid (OSG)
- Grid Middleware Integration, Development, Support, & Help
- Contribute to the OSG in accordance with the needs of the Fermilab Grid community



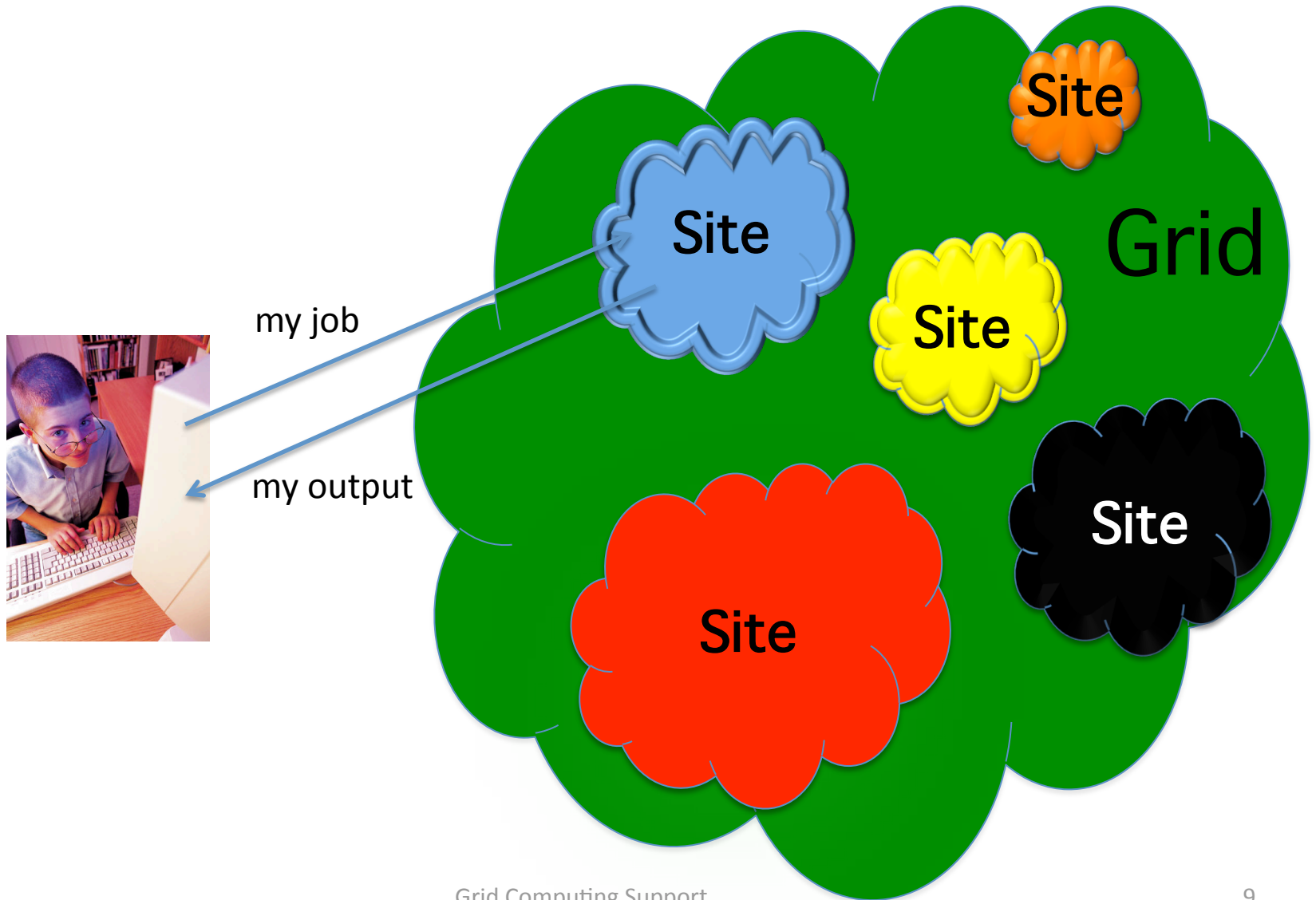


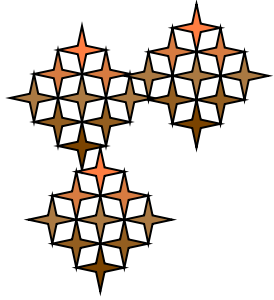
The Dream





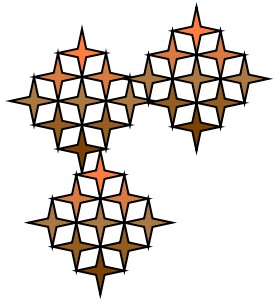
What Often Happens



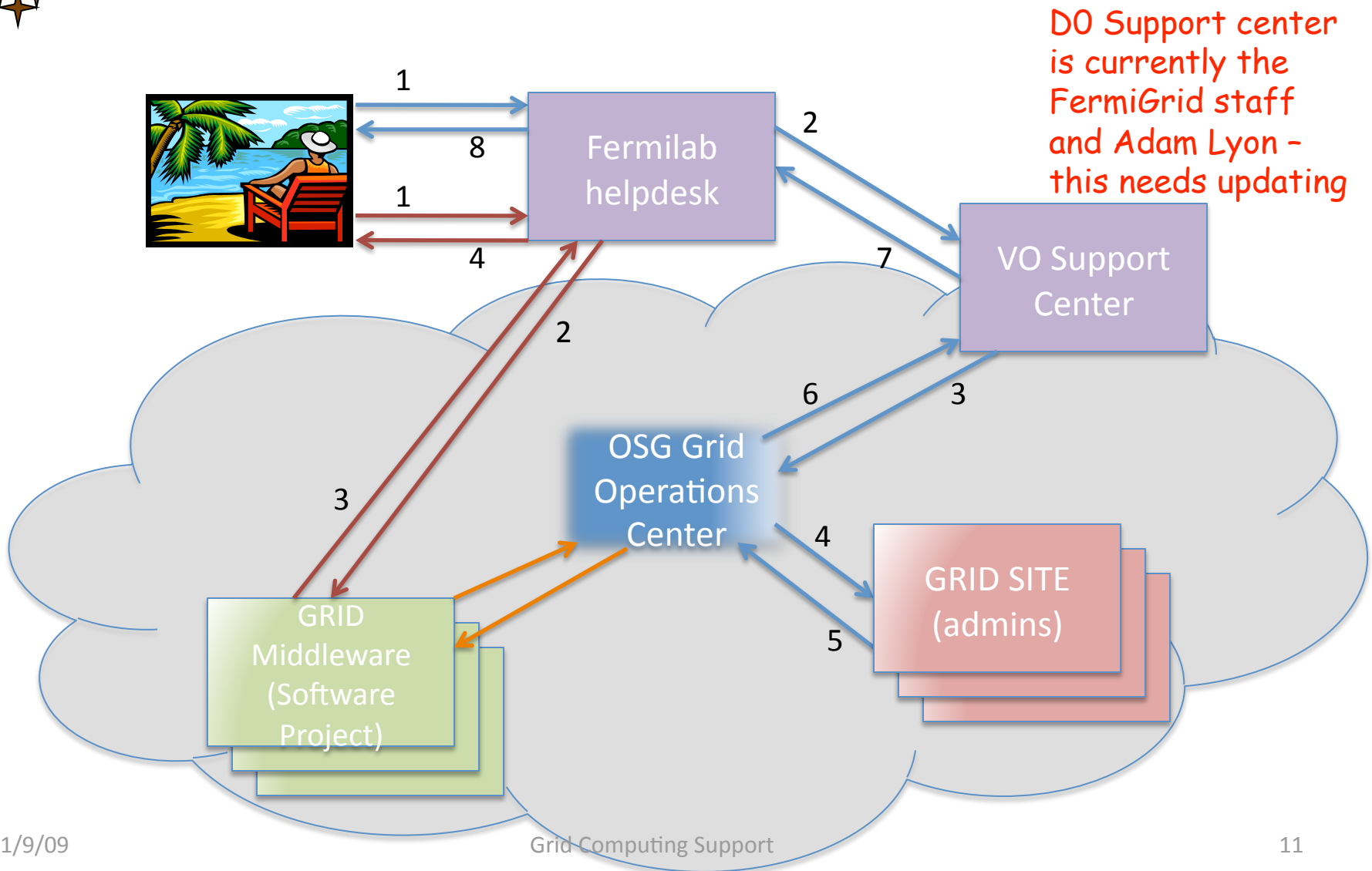


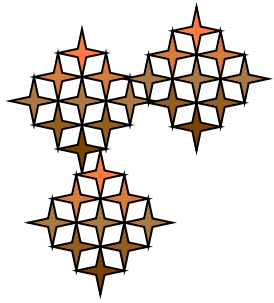
What is the Grid?

- Heterogeneous, highly distributed, loosely coupled resources
 - Policies: often site specific
 - Policy matching project starting
 - Advertised policies not necessarily implemented policies – everyone is busy, this is HARD
 - Management: often site specific
 - Common management model does exist
- Monitoring tools, batch systems, priorities are often different across sites



ANY Problem/Question

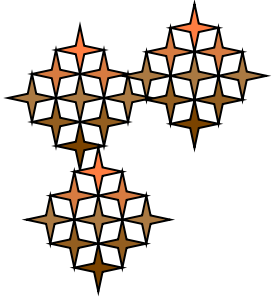




More Help

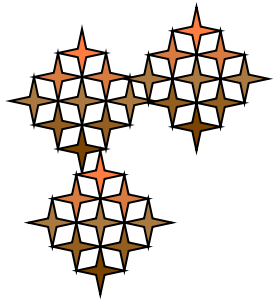
- Grid users meeting
 - Alternate Monday's, 3:30, fcc1 (next one Jan 12) **(start here)**
- Grid School – Introduction, Running jobs, using Storage
- OSG VO phone meeting, every Thurs 1:30, (510) 665-5437, Meeting ID 1111

**Grid Facilities
can help!!**



More Help

- Mailing lists for grid users at Fermi
 - `fermigrid-announce@listserv.fnal.gov`
 - fermigrid-users@listserv.fnal.gov - community support
 - osg-general@opensciencegrid.org - osg information and questions
- OSG documentation twiki OSG can help!!
 - <http://twiki.grid.iu.edu/bin/view/Documentation/WebHome>

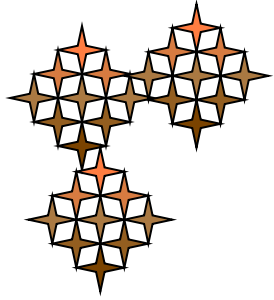


Tools to help you

- ReSS – Resource Selection Service
 - Matches jobs to sites
 - RESS project works with users to discuss the best algorithms
 - Run as part of the OSG Grid middleware software stack
 - <https://osg-ress-1.fnal.gov:8443/ReSS/ReSS-prd-History.html>

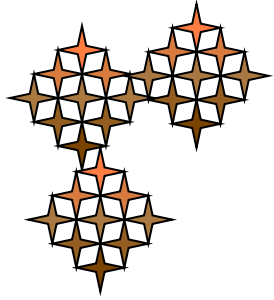
Grid Facilities can help!!
- OSG MatchMaker (MM)
 - Based on ReSS
 - Hides some details from you
 - Runs a daemon on submit node
 - <http://sourceforge.net/projects/osgmm/> to get source and help

OSG can help!!



Tools to help you

- “Fermilab VO” basic job acceptance tests
 - <http://fermigrid.fnal.gov/fermigrid-metrics.html>
- OSG VO Site test kit
 - Configurable to run several tests on OSG sites
 - <https://twiki.grid.iu.edu/bin/view/VirtualOrganizations/OsgVoSiteTests>

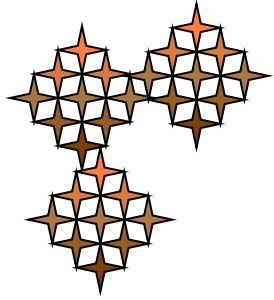


Monitoring Tools

- FermiGrid Grid School 201
 - Introduction to condor_q and other monitoring
 - <https://cd-docdb.fnal.gov:440/cgi-bin/ShowDocument?docid=2615>

**Grid Facilities
can help!!**

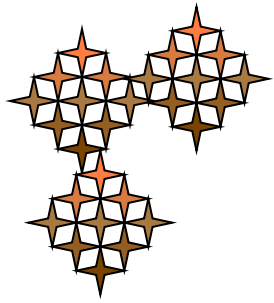
**Take Grid School
classes when offered!**



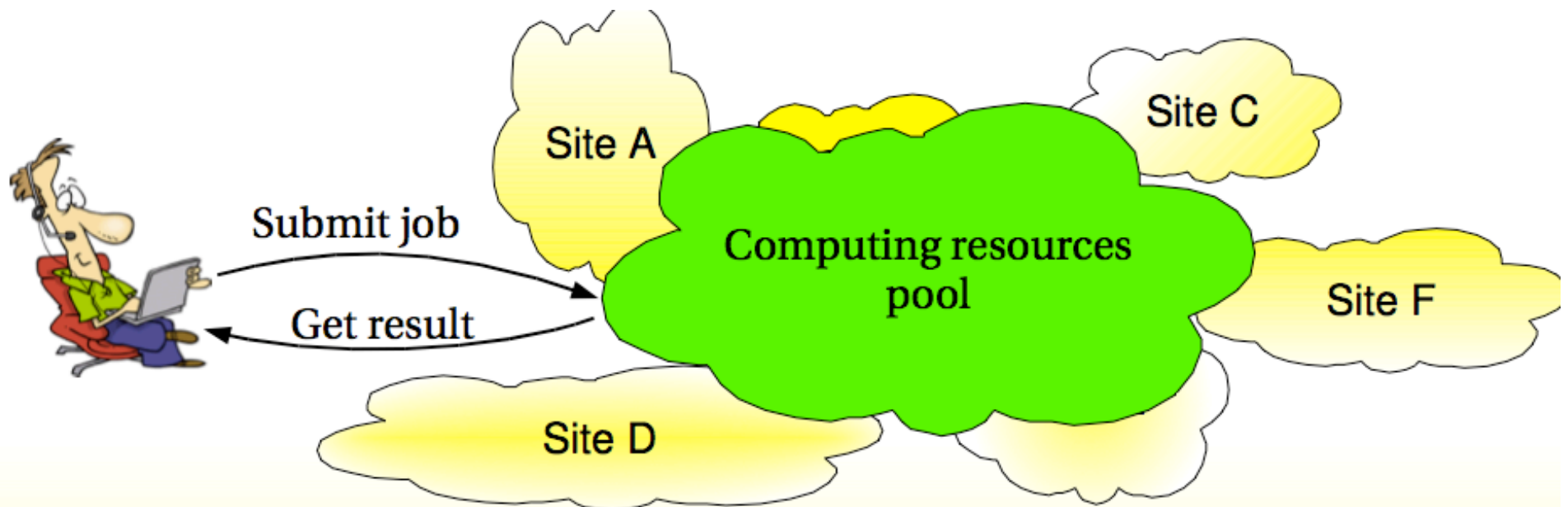
Workload Management System

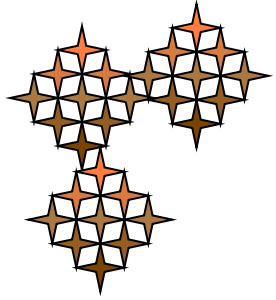
- Responsible for the distribution and management of jobs across Grid resources
- Several at Fermi use glidein WMS
 - CDF
 - Production, Analysis, Monte Carlo
 - CMS
 - Monte Carlo (production)
 - Analysis (integration)
 - MINOS
 - Analysis
- Involves VO support
- Includes monitoring
- <http://www.uscms.org/SoftwareComputing/Grid/WMS/glideinWMS/>

**Grid Facilities
can help!!**



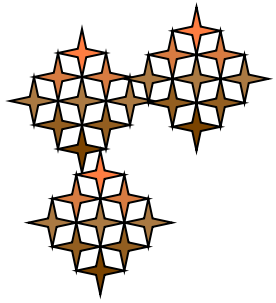
Glidein WMS





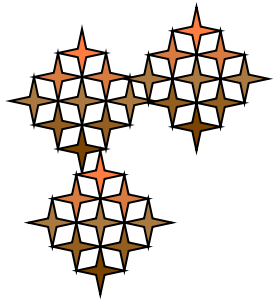
NOW....

- Let's talk about what you need.



Backup Slides





Collaborations

- OSG
- EGEE
- Globus
- Condor
- VDT
- BNL
- TechX